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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,964	10/11/2001	Edwin James Harris IV	112690-098	2962

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EXAMINER

VIJAYAKUMAR, KALLAMBELLA M

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,964

Applicant(s)

HARRIS, EDWIN JAMES

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 10-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

- Claims 1-32 are pending with the application, and claims 10-32 have been withdrawn from consideration.
- Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
- Applicant's arguments with respect to claim 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-3 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Martinez et al (US 5,294,374).

Martinez et al disclose a self-supporting electrical overstress material (EOM) sheets comprising conductive filler dispersed in a curable insulative binder such as silicone (Abstract,

Col-3, Ln 60-63; Col 18, Ln 56-59, Col-20, Example-1) meets the limitation of claim-1. With regard to the product by process limitation in claim-1, claims are drawn to the product it-self.

With regard to the conductive particles in claims 2-3, the prior art discloses the use of Ni and Al particles (Col-14, Table-1).

With regard to the claims 7-9, the prior art teaches electrical overstress material comprising silicone rubber, nickel powder, semiconductor powder and silica forming a wet blend that is molded and cured forming EOM sheets (Col-20-21, Example-1, Col-10, Ln 60-66, Col-12, Ln 52). All the limitations of the instant claims are met.

The reference is anticipatory.

2. Claims 1-6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Schrier et al (WO 96/02922).

Schrier et al disclose a variable voltage protection (VVP) material comprising a reinforcing layer of insulating material having a substantially constant thickness **impregnated with a voltage material (VM)** (Pg-4, Ln 16-18; Pg-8, Ln 28-31, Pg-9, Ln 20-22). The VVP was fabricated in the form of a webbing, tape, label or a film with a typical thickness of 2-3 mil (0.06-0.08 mm) that could be custom cut meets the limitation of a variable voltage substrate in claim-1 (Pg-14, Ln 27-30). Further, the instant claim-4 recites the limitation of a polyimide film as a curable binder. The reinforcing material was impregnated with VM material paste containing a solvent, aluminum powder, silica and fluorosilicone binder meets the limitations of claims 1-3 and 9 (Pg-12, Ln 10-18). With regard to the product by process limitation in claim-1, the claims are drawn to the product it-self.

With regard to the curable binder in claims 4-6, the prior art teaches VVP containing various binders including a low compressibility fabric, a resin polymer tape, a mat, non-woven mat of woven-fibers, glass fibers and epoxy (Pg-8, Ln-1, 8-14, 18-20, Fig 1-2). All the limitations of the instant claims are met.

The reference is anticipatory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrier et al (WO 96/02922) as applied to claim 1 above, and further in view of Hyatt et al (US 4,726,991).

The disclosure by Schrier et al on the variable voltage protection (VVP) material as set forth in Rejection-2 under 35 USC 102(b) is herein incorporated.

Schrier et al do not disclose the use of semiconducting particles in the VVP composition per the claims 7-8. However the prior art is suggestive that any voltage variable material known in the art including those taught by Hyatt et al could be used.

In the analogous art, Hyatt teaches the composition of EOS materials comprising semiconductor particles such as semiconducting carbides and their benefits in providing wide range EOS protection for the equipment (Abstract, Col-6, Ln, 53-57; Col-9, Ln 21-24).

It would have been obvious to a person of ordinary skill in the art to combine the teachings of Schrier et al and Hyatt et al to benefit from a wide range electrical overstress protection material and with the reasonable expectation of success because the prior art is suggestive of such combination.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Charles et al (US4,959,262).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-

1324. The examiner can normally be reached on M-Th, 07.00 - 16.30 hrs, Alt. Fri: 07.00-15.30 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMV
January 28, 2005.


Mark Kopec
Primary Examiner